

AMENDMENTS TO THE CLAIMS:

Claim 1. (Currently amended) An electric power steering device for transmitting rotation of a steering assisting electric motor to a steering mechanism through a small gear and a large gear, comprising:

a first member on a rotary shaft of said electric motor;

a second member at one end of the small gear; and

an elastic member between the first and second members for transmitting a torque between the two members;

wherein said elastic member has a first torsional elastic modulus when corresponding to a case, in which a torsion angle between the first and second members is less than a predetermined angle, and a second torsional elastic modulus when corresponding to another case, in which said torsion angle is one of equal to and larger than the predetermined angle, and

wherein said first torsional elastic modulus is smaller than said second torsional elastic modulus,

wherein said elastic member comprises a radially and axially extending plate-shaped portion,

wherein at least one of said elastic member and said first and second members comprises a circumferentially extending projection at an outer periphery, and

wherein the circumferentially extending projection contacts said first and second members when no torque or low torque is applied to one of said first and second members.

Claim 2. (Currently amended) The electric power steering device according to Claim 1,

wherein said elastic member comprises a plurality of radially and axially extending plate-shaped portions,

wherein said first and second members comprise protrusions for meshing in a torque transmittable manner while clamping the elastic member in a rotational direction of the rotary shaft,

wherein the corresponding protrusions of the first and second members comprise clamping faces acting as torque transmission faces capable of clamping the elastic member in-between, and

wherein at least one of said clamping faces and a clamped face as the torque transmission faces of the elastic member confronting the clamping faces comprise a plurality of said circumferentially extending projections for establishing the first torsional elastic modulus by compressing the elastic member locally when said torsion angle is less than the predetermined angle.

Claim 3. (Currently amended) An electric power steering device for transmitting rotation of a steering assisting electric motor to a steering mechanism, comprising:

a first member on a rotary shaft of said electric motor;

a second member at one end of the small gear; and

an elastic member between the first and second members for transmitting a torque between the two members; ~~The electric power steering device according to Claim 1,~~

wherein said first and second members comprise a plurality of projections for meshing in a torque transmittable manner while clamping the elastic member in a rotating direction of the rotary shaft,

wherein said elastic member comprises a projection having a bifurcated structure defining a slit cavity portion, and

wherein the elastic member is compressed to collapse the slit cavity portion substantially when said torsion angle is one of equal to and larger than the predetermined angle.

Claim 4. (Currently amended) A joint for use in an electric power steering device, comprising:

a first member;

a second member; and

an elastic member between the first and second members for transmitting a torque between the two members;

wherein said elastic member has a first torsional elastic modulus when corresponding to a case, in which a torsion angle between the first and second members is less than a predetermined angle, and a second torsional elastic modulus when corresponding to another case, in which said torsion angle is one of equal to and larger than the predetermined angle, and

wherein said first torsional elastic modulus is smaller than said second torsional elastic modulus,

wherein said elastic member comprises at least one radially and axially extending plate-shaped portion,

wherein at least one of said plate-shaped portion and said first and second members comprises a circumferentially extending projection at an outer periphery, and

wherein the circumferentially extending projection contacts said first and second members when no torque or low torque is applied to one of said first and second members.

Claim 5. (Canceled).

Claim 6. (Currently amended) A joint for use in an electric power steering device, comprising:

a first member;

a second member; and

an elastic member between the first and second members for transmitting a torque between the two members;

wherein said elastic member has a first torsional elastic modulus when corresponding to a case, in which a torsion angle between the first and second members is less than a predetermined angle, and a second torsional elastic modulus when corresponding to another case, in which said torsion angle is one of equal to and larger than the predetermined angle, and

wherein said first torsional elastic modulus is smaller than said second torsional elastic modulus, and

wherein said elastic member comprises a projection having a bifurcated structure.

Claim 7. (Currently amended) A joint for use in an electric power steering device, comprising:

a first member;

a second member; and

an elastic member between the first and second members for transmitting a torque between the two members;

wherein said elastic member has a first torsional elastic modulus when corresponding to a case, in which a torsion angle between the first and second members is less than a predetermined angle, and a second torsional elastic modulus when corresponding to another case, in which said torsion angle is one of equal to and larger than the predetermined angle, and

wherein said first torsional elastic modulus is smaller than said second torsional elastic modulus, and

wherein said elastic member comprises:

a first layer having a first elastic modulus; and

a second layer having a second elastic modulus that is higher than said first elastic modulus.

Claim 8. (Currently amended) An electric power steering device comprising:

a first member comprising a rotary shaft of an electric motor;

a second member comprising a gear of a steering mechanism; and

an elastic member between the first member and the second member and having at least a two-stage torsional elastic modulus,

wherein said two-stage torsional elastic modulus comprises a first torsional elastic modulus corresponding to a first range of torsion angles and a second torsional elastic modulus corresponding to a second range of torsion angles, and

wherein said elastic member comprises:

a first layer having a first elastic modulus; and

a second layer having a second elastic modulus that is higher than said first elastic modulus.

Claim 9. (Currently amended) The device of claim 8, wherein said first torsional elastic modulus corresponds to an angle between the first and second members that is less than a predetermined angle and said second torsional elastic modulus is larger than the first torsional elastic modulus when the angle between the first and second members is one of equal to and larger than the predetermined angle.

Claim 10. (Currently amended) An electric power steering device comprising:

a first member comprising a rotary shaft of an electric motor;

a second member comprising a gear of a steering mechanism; and

an elastic member between the first member and the second member and having at least a two-stage torsional elastic modulus,

wherein said two-stage torsional elastic modulus comprises a first torsional elastic modulus corresponding to a first range of torsion angles and a second torsional elastic modulus corresponding to a second range of torsion angles,

wherein said first torsional elastic modulus corresponds to an angle between the first and second members that is less than a predetermined angle and said second torsional elastic modulus is larger than the first torsional elastic modulus when the angle between the first and second members is one of equal to and larger than the predetermined angle, and

~~The device of claim 9~~, wherein said elastic member comprises a foam portion having said first elastic modulus

Claim 11. (Canceled).

Claim 12. (Currently amended) The device of claim 8 ~~11~~, wherein said first and second layers extend radially outward from a body portion of said elastic member.

Claim 13. (Currently amended) The device of claim 8 ~~11~~, wherein said first layer comprises two first layers that sandwich said second layer.

Claim 14. (Previously presented) The device of claim 8, wherein each of said first member and said second member comprises a protrusion.

Claim 15. (Currently amended) The device of claim 8, wherein said elastic member comprises:

a body portion; and

a plurality of plate-shaped ~~clamped~~ portions radially extending from said body portion.

Claim 16. (Canceled).

Claim 17. (New) The device of claim 3, wherein said bifurcated structure comprises a

pair of branch portions defining said slit portion between said pair of branch portions.

Claim 18. (New) The joint of claim 6, wherein said bifurcated structure comprises a radially extending bifurcated structure.

Claim 19. (New) The joint of claim 6, wherein said bifurcated structure comprises a pair of branch portions defining a slit between the pair of branch portions.

Claim 20. (New) The joint of claim 7, wherein each of said first and second layers extends radially and axially.

Claim 21. (New) The device of claim 8, wherein each of said first and second layers extends radially and axially.